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This chapter describes the concept of accrued depreciation as it pertains to assessing:

- Single-family residential structures
- Residential and agricultural yard structures

This chapter discusses how depreciation is used in the valuation process. It describes how the grade, age, and condition of a structure affect the determination of accrued depreciation. It provides step-by-step instructions for determining the depreciation percentage applicable to individual structures.

This chapter also provides step-by-step instructions for adjusting the standard residential depreciation table by neighborhood through the use of a neighborhood factor.

Depreciation Estimates

In estimating the cost new of the improvements, the assessing official has determined the upper limit of value the improvements will have on the valuation date. Depreciation is defined as the loss in value, from this upper limit, that the improvements on a parcel of real property suffer from a variety of causes. Those causes can be physical causes, functional causes, and external causes. These causes can operate individually or they can operate in combination with each other to cause a loss in value.

The **physical causes** refer to the wear and tear that an improvement suffers from its regular use. It may also be caused by abuse, the impact of the weather, and insect infestation such as termites. This type of loss in value is called physical deterioration.

Functional loss in value is caused by some type of inutility within the structure and materials or design that diminishes the ability of the structure to perform the function for which it was constructed and/or might be used. This type of loss in value is called functional obsolescence.

External obsolescence typically is impairment in the utility or salability of the structure due to negative influences that occur outside the property.

Depreciation may begin at the moment the structure is under construction and, in some cases though not often, a structure may suffer from substantial depreciation on the day that it is first occupied. These kinds of losses in value tend to come from poor design, poor construction, failure of the owner or contractor to consider such things as sub-soil conditions, suitability of building materials, design considerations, or other similar situations.

There is probably no issue that is less understood than the application of depreciation in the valuation of a structure. We tend to hear about depreciation in a wide variety of areas including accounting, income tax, public utility regulation, and of course valuation purposes. The appropriate calculation of depreciation remains as one of the single most important parts of arriving at a fair and equitable valuation for real property taxation purposes.

Because we are using the concept of replacement cost new minus depreciation derived from the market, much of the *functional obsolescence* is taken care of. *External obsolescence* will be accounted for through the **neighborhood factor**. There may be some extreme cases of *functional or external obsolescence* that may need to be handled on a case-by-case basis.

The determination of depreciation must consider:

- a. The **chronological age** of the structure

- b. The **effective age** of the structure
- c. The **quality** of the materials, workmanship, and design used in the construction of the structure
- d. The **condition rating** of the structure
- e. The **neighborhood factor**

Each of these factors, working in concert, determines the loss of value that a structure suffers.

Definitions

Chronological Age – The actual, sometimes called historical, age is the number of years that have elapsed since the building construction was completed up to the depreciation date, which is March 1, 2011. The chronological age of a structure has traditionally been used as a strong indicator of its depreciation. But this approach, while simple and easy to use, does not generally reflect the actions of the market in buying and selling decisions, or the actual loss in value suffered by the improvements.

Effective Age – The age of a structure as compared to other structures performing like functions. Sometimes it can also be thought of as the actual age less the years that have been removed from the actual age by such things as maintenance, repair, upgrading, and change. Effective age can also be decreased by the removal of some kind of functional inadequacy or the modernization of one or more of the systems. The items that would tend to reduce the effective age might include: new paint, carpeting, roof, furnace, electrical system, windows, plumbing, room additions or general home remodeling. For mass appraisal purposes and for the valuation of real property within the State of Indiana, the **condition rating** will reflect the effective age of the structures. The condition ratings will be discussed in the next section of this appendix.

Quality – See discussion of quality grading in Appendix A.

Condition Rating – A rating assigned each structure that reflects its effective age in the market. It is determined by inspection of the structure and by relating the structure to comparable structures within the subject's neighborhood. Additional information on condition ratings can be found in Table B-1 for residential structures and Table B-8 for yard structures.

Neighborhood Factor – A factor determined by analyzing sales in each neighborhood. It adjusts the standard depreciation tables in this manual to meet market conditions within the neighborhood.

Condition Ratings

The condition and the economic life of a structure can be changed by maintenance and modernization. A residential structure has at the day it was brand new and first occupied an estimated total economic life. By changing, maintaining, or modernizing the structure, the age of the structure is effectively lowered, thereby the total economic life is extended. This change in economic life is reflected in the condition rating assigned the structure.

The effective age of the structure, as used in this manual, is expressed by the condition rating assigned to the structure. Generally, similar structures tend to depreciate at about the same rate over their economic lives. The way in which the owners maintain them can influence the pace of their depreciation. If structure “A” is maintained better than comparable structure “B”, then the effective age of structure “A” will be less than that of structure “B”. It is the condition of the structure that is the key to determining the effective age. Effective age may also be changed in a residential structure when remodeling takes place and the structure is updated, renovated, or when additional area is added which increases the structures functional utility.

Table B-1 on the next page lists the condition ratings to be assigned to residential structures, other than yard structures, and gives an explanation of the characteristics of each.

Table B-1— Residential Condition Ratings (other than yard structures)

CONDITION RATING	EXPLANATION OF CHARACTERISTICS
Excellent	The structure is in like-new physical condition and has been well maintained. It has been modernized and updated and suffers from no inutilities. It is located in a premium location within the neighborhood.
Good	The structure has been maintained in better physical condition than the majority of the structures in the neighborhood and suffers from no deferred maintenance. It offers more amenities and has better utility than the majority of the structures in the neighborhood. It is in a better location within the neighborhood than the majority of structures.
Average	The structure has been maintained like and is in the typical physical condition of the majority of structures in the neighborhood. It offers the same utility as the majority of the structures in the neighborhood. It has the same location influences as the majority of structures in the neighborhood.
Fair	The structure suffers from minor deferred maintenance and demonstrates less physical maintenance than the majority of structures within the neighborhood. It suffers from minor inutilities in that it lacks an amenity that the majority of the structures in the neighborhood offer. It is in a less desirable location within the neighborhood than the majority of structures.
Poor	The structure suffers from extensive deferred maintenance. It suffers from major inutilities in that it lacks several amenities that the majority of structures in the neighborhood offer. It is in a poor location within the neighborhood.
Very Poor	Conditions in the structure render it unusable. It is extremely unfit for human habitation or use. There is extremely limited market value in use and it is approaching abandonment. The structure needs major reconstruction to have any effective economic value.

Determining Depreciation for a Residential Structure

- Step 1. Determine the **quality grade** of the structure.
- Step 2. Determine the **condition rating** of the structure.
- Step 3. Determine the **chronological age** (actual age) of the structure.
- Step 4. Select the depreciation chart for the assigned quality grade.
- Step 5. On this depreciation chart, correlate the chronological age of the structure with its condition rating to find the percentage amount of depreciation.

- Step 6. Enter the depreciation into the appropriate area on the property record card.

Determining the Neighborhood Factor

The assessing official must determine a neighborhood factor for the neighborhood in which the subject property is located. A neighborhood is defined as a geographical area exhibiting a high degree of homogeneity in residential amenities, land use, economic and social trends, and housing characteristics. In other words, it is the market or economic base for the subject property. The neighborhoods determined for establishing land values will be the same neighborhoods that are used in determining neighborhood factors for depreciation purposes.

The neighborhood factor accounts for the impact on value caused by physical characteristics in the neighborhood such as type and layout of streets, availability of support services, and utilities. It also takes in to account the economic characteristics such as demand for property and mortgage interest rates; governmental characteristics such as police protection, fire protection, and zoning; and social characteristics such as crime rates, owner-occupant ratios, and family size.

Neighborhood factors are assigned to each neighborhood based upon an analysis of residential properties that have sold within the neighborhood. This is done using the following procedures:

- Step 1. Assemble the property record cards and disclosure statements on all improved residential properties that have sold with the neighborhood. These sales should be drawn from a twenty-four (24) month period of time preceding the valuation date. For the 2011 reassessment this would be 1/1/09 to 12/31/10.
- Step 2. Edit the sales and remove any which are not representative of arm's-length transactions between a willing seller and willing buyer.
- Step 3. For each of the remaining sales, subtract from the sale price the value of any personal property included in the transfer to arrive at the indicated sale price for the real property.
- Step 4. Subtract the assigned land value from the indicated sale price of the real property to determine the sale price of the improvements.
- Step 5. Locate the value for all improvements from the property record card for each property that sold.

- Step 6. Calculate the total adjusted sale prices (improvements only) and the total \div Improvement Value for all sales.
- Step 7. Divide the total adjusted sale prices by the total \div Improvement Value to get the neighborhood factor.
- Step 8. Apply the neighborhood factor to all residential improvements within the neighborhood as indicated on the property record card.

Example of Computing a Neighborhood Factor

SALE #	SALE PRICE	LAND VALUE	IMPROVEMENT SALE PRICE	RCN	DEPRECIATION	IMP VALUE
1	\$100,000	\$18,000	\$82,000	\$136,000	(\$36,000)	\$100,000
2	\$156,000	\$20,000	\$136,000	\$174,000	(\$25,000)	\$149,000
3	\$122,000	\$20,000	\$102,000	\$130,000	(\$15,000)	\$115,000
4	\$113,300	\$15,000	\$98,300	\$138,000	(\$38,000)	\$100,000
5	\$103,000	\$15,000	\$88,000	\$132,000	(\$32,000)	\$100,000
6	\$99,500	\$15,000	\$84,500	\$122,000	(\$22,000)	\$100,000
7	\$100,000	\$18,000	\$82,000	\$136,000	(\$26,000)	\$110,000
8	\$105,000	\$18,000	\$87,000	\$138,000	(\$20,000)	\$118,000
9	\$110,000	\$18,000	\$92,000	\$142,000	(\$20,000)	\$122,000
10	\$124,000	\$18,000	\$106,000	\$157,000	(\$32,000)	\$125,000
TOTALS			\$957,800			\$1,139,000

Divide the total adjusted sale prices (improvements only) by the total Improvement Value to get the neighborhood factor.

$$\$957,800 \div \$1,139,000 = .84 \text{ or } 84\%$$

Apply the neighborhood factor to all residential improvements within the neighborhood as indicated on the property record card.

Depreciation Tables for Residential Structures

This section provides instructions for using the Residential Depreciation Tables to determine the total depreciation percentage for a particular improvement. These tables are to be used on the following types of residential and agricultural improvements:

- dwelling units
- attached and detached garages
- stick-built room additions built between reassessments
- exterior features built between reassessments

- solar and geothermal heating and cooling systems

Note: Room additions to residential dwelling units valued in the "Summary of Residential Improvements" section of the property record card receive zero percent (0.00%) depreciation from the year of completion until the next general reassessment. At the time of the next general reassessment, the room addition will be considered part of the main structure and depreciated in the same manner as the main structure.

The total depreciation percentage for the improvements listed above is calculated by applying the following steps to the Residential Depreciation Tables:

- Step 1 Determine the proper table to use based on the Grade of the structure.
- Step 2 In the "Condition Rating" column, locate the row corresponding to the condition rating for the improvement.
- Step 3 In the "Actual Age" column, locate the row corresponding to the improvement's actual age.
- Step 4 Find the intersection of the selected row (age) and the selected column (condition rating). This number is the total depreciation percentage for the improvement.

Example: A thirty-two (32) year old C grade residence with a condition rating of good would have a total depreciation of twenty-four percent (24%).

Note: Instructions for recording the total depreciation percentage on the property record card, converting this percentage to a multiplier, and using this multiplier to calculate the remainder value of an improvement are provided in the *Completing the Summary of Residential Improvements* section in Chapter 3.

The following pages give the standardized depreciation tables for the various quality grades of construction.

Table B-2.—Residential Depreciation Chart- Quality Grade “AAA” “AA” “A” “B”

RESIDENTIAL DEPRECIATION CHART - QUALITY GRADE “AAA” “AA” “A” “B”						
ACTUAL AGE	CONDITION RATING					
	Very Poor	Poor	Fair	Average	Good	Excellent
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21-25						
26-30						
31-35						
36-40						
41-45						
46-50						
51-60						
61-70						
Over 70						

Table B-3.—Residential Depreciation Chart- Quality Grade “C”

RESIDENTIAL DEPRECIATION CHART - QUALITY GRADE “C”						
ACTUAL AGE	CONDITION RATING					
	Very Poor	Poor	Fair	Average	Good	Excellent
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21-25						
26-30						
31-35						
36-40						
41-45						
46-50						
51-60						
61-70						
Over 70						

Table B-4.—Residential Depreciation Chart- Quality Grade “D” “E”

RESIDENTIAL DEPRECIATION CHART - QUALITY GRADE “D” “E”						
ACTUAL AGE	CONDITION RATING					
	Very Poor	Poor	Fair	Average	Good	Excellent
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21-25						
26-30						
31-35						
36-40						
41-45						
46-50						
51-60						
61-70						
Over 70						

Determining the Depreciation Percentage for Residential Yard Structures

This section provides instructions for using the various depreciation tables applicable to residential and agricultural yard structures. Refer to **Table B-5. Determining the Depreciation Table for Yard Structures**, to determine which depreciation table is applicable to the type of structure you are appraising. After determining the appropriate depreciation table, refer to the appropriate section below for specific instructions on using that table.

Table B-5.—Determining the Depreciation Table for Yard Structures

Yard Structure	Depreciation Table
Barns and sheds other than confinement facilities	30 year life expectancy
Bath houses	30 year life expectancy
Boat houses	30 year life expectancy
Car sheds	30 year life expectancy
Chicken, duck, turkey barns	20 year life expectancy
Confinement facilities	20 year life expectancy
Containment walls	40 year life expectancy
Corn cribs, wire and frame	30 year life expectancy
Fire-resistant construction	40 year life expectancy
Garage, attached and detached	Residential Depreciation Schedule (by <i>Grade</i>)
Gazebos	30 year life expectancy
Grain storage bins	20 year life expectancy
Granaries	30 year life expectancy
Greenhouses, residential	20 year life expectancy
Lean-to's	30 year life expectancy
Milk houses	30 year life expectancy
Milk parlors	30 year life expectancy
Mobile home park improvements (except pool and mobile homes)	40 year life expectancy
Paving, asphalt	20 year life expectancy
Paving, concrete	20 year life expectancy
Potato storage structures	30 year life expectancy
Poultry houses, non-confinement	30 year life expectancy
Quonset buildings	30 year life expectancy
Sheds, residential	20 year life expectancy

Silos, masonry and steel	30 year life expectancy
Silos, trench and bunker	30 year life expectancy
Slurry tanks	30 year life expectancy
Solar and Geothermal units	Residential Depreciation Schedule (by <i>Grade</i>)
Stables	30 year life expectancy
Swimming pools and pool enclosures, in-ground	In-ground Swimming Pool Table
Swimming pools, above-ground	Above-ground Swimming Pool Table
Tennis courts	30 year life expectancy
Tobacco barns	30 year life expectancy

Table B-6 lists the condition ratings to be assigned to yard structures, and gives an explanation of the characteristics of each.

Table B-6.—Condition Ratings for Yard Structures

Classification	Indicated Depreciation
Excellent	The structure is in like-new physical condition and has been well maintained. It has been modernized and updated and suffers from no inutilities.
Good	The structure has been maintained in better physical condition than the majority of structures of its type and suffers from no deferred maintenance. It offers more amenities and has better utility than the majority of the structures of its design.
Average	The structure has been maintained like and is in the typical physical condition of the majority of structures of its type. It offers the same utility as the majority of the structures of its design.
Fair	The structure suffers from minor deferred maintenance and demonstrates less physical maintenance than the majority of structures of its type. It suffers from minor inutilities in that it lacks amenities that the majority of structures of its design offer.
Poor	Many repairs needed; the structure suffers from extensive deferred maintenance. It suffers from major inutilities in that it lacks several amenities that the majority of structures of its design offer. However, it is still being put to some use.
Very Poor	Extensive repairs needed; the structure suffers from extensive deferred maintenance and is at the end of its physical life. It suffers from extensive inutilities in that it lacks most amenities that the majority of structures of its age and design offer.
* Sound Value (applies to agricultural improvements only)	Regardless of the physical condition of the structure, the economics of farming dictate this structure is no longer productive in the operation of the farm. Therefore, it has only minimal, or sound value, on the date of valuation.

* Structures that are no longer used in farming operations because the economics of modern farming dictate their abandonment should receive a sound value structure condition classification. However, if an individual property owner has made a decision not to use the structure for personal reasons but other farmers in the area are using similar structures, it should be assigned a structure condition classification between excellent and very poor.

If a sound value condition classification is given, the assessing official is not required to estimate the replacement cost new and depreciation for the structure. The sound value is a lump sum amount that is entered in the Improvement Value column in the "Summary of Non-Residential Improvements" section of the PRC with an entry of "SV" (sound value) made in the "Condition" column. The sound value ranges for the various types of farm structures are given at the end of the cost schedule for each type.

Using the Life Expectancy Depreciation Tables

There are three (3) life expectancy depreciation tables for residential and agricultural yard structures. In order to use these tables you must determine:

- which life expectancy table to use
- the age of the yard structure
- the condition of the yard structure

To determine the total depreciation percentage for a yard structure that uses one of the life expectancy tables, perform the following steps:

Step 1 In the "Actual Age" column of the appropriate life expectancy table, locate the row corresponding to the yard structure's actual age.

Step 2 Locate the column below the "Condition" heading that corresponds to the condition rating selected for the yard structure.

Step 3 Find the intersection of the selected row (actual age) and the selected column (condition). This number is the total depreciation percentage for the yard structure.

Example: A residential greenhouse is 12 years old and is in good condition. The 20-year Life Expectancy Depreciation Table indicates the total depreciation percentage for the greenhouse is thirty percent (30%).

Note: Instructions for recording the total depreciation percentage on the property record card, converting this percentage to a multiplier, and using this multiplier to calculate the remainder value of a residential or agricultural yard structure are provided in the section *Task 4 - Calculating the Remainder Value* in Chapter 5.

Table B-7.—20 YEAR LIFE EXPECTANCY

Actual Age	Condition					
	EX	G	AV	F	P	VP
01						
02						
03-04						
05-06						
07-08						
09-10						
11-12						
13-14						
15-16						
17-20						
21-26						
27-30						
Over 30						

Residential utility sheds and greenhouses, asphalt and concrete paving, hog confinement facilities, veal confinement facilities, poultry confinement buildings, trench and bunker silos, steel grain bins, slurry tanks, masonry and steel silos and chicken, duck or turkey barns.

Table B-8.—30 YEAR LIFE EXPECTANCY

Actual Age	Condition					
	EX	G	AV	F	P	VP
01-02						
03-04						
05-06						
07-10						
11-13						
14-16						
17-19						
20-22						
23-26						
27-32						
33-41						
42-46						
Over 46						

Stables, boat houses, gazebos, car sheds, bath houses, tennis courts, all barns and sheds (type-1, type-2 and type-3), lean-tos, granaries, wire and frame corn cribs, milk houses, milk parlors, tobacco barns, quonset buildings, potato storage structures and non-confinement poultry houses.

Table B-9.—40 YEAR LIFE EXPECTANCY

Actual Age	Condition					
	EX	G	AV	F	P	VP
01-03						
04-06						
07-09						
10-13						
14-17						
18-21						
22-25						
26-30						
31-35						
36-44						
45-55						
56-61						
Over 61						

Fire resistant construction.

Using the Swimming Pool Depreciation Tables

There are two (2) swimming pool depreciation tables. In order to use these tables you must first determine the following:

- which table to use
- the age of the swimming pool

Swimming pools that are designed and manufactured to stand alone without side support from surrounding ground are classified as above ground and are depreciated using the **Above Ground Swimming Pool Depreciation Table**. Swimming pools with the water level at or below the surrounding earth grade are depreciated using the **In-Ground Swimming Pool and Pool Enclosure Depreciation Table**.

The actual age of the swimming pool on the date of the general reassessment is to be used. Should the pool show excessive deferred maintenance for its actual age, an effective age of six (6) years less than the pool's construction age should be used to determine depreciation.

Note: Swimming pools are only depreciated during the general reassessment year; no further depreciation is to be applied until the next general reassessment.

To determine the total depreciation percentage for a swimming pool, perform the following steps:

- Step 1: In the "Age" column of the appropriate depreciation table, locate the row corresponding to the swimming pool's actual age or effective age.
- Step 2: Find the intersection of the selected row (age) and the "Depreciation" column. This number is the total depreciation percentage for the swimming pool.

Example: An in-ground swimming pool is nine (9) years old. The In-Ground Swimming Pool and Pool Enclosure Depreciation Table indicates the total depreciation percentage for the swimming pool is twenty-five percent (25%).

Note: Instructions for recording the total depreciation percentage on the property record card, converting this percentage to a multiplier, and using this multiplier to calculate the remainder value of a swimming pool are provided in the section *Task 4 - Calculating the Remainder Value* in Chapter 5.

The above ground and below ground swimming pools, the 20 year, the 30 year, and the 40 year life expectancy tables are included in Appendix C.

Table B-10.—ABOVE GROUND SWIMMING POOL**DEPRECIATION TABLE**

Age	Depreciation
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
Over	

Physical and functional condition may contribute to an acceleration of the pool's age.

Table B-11.—SWIMMING POOL and POOL ENCLOSURE**DEPRECIATION TABLE**

Price swimming pool from standard schedule and depreciate on the basis of a twenty-five (25) year life expectancy, as follows:

Age	Depreciation
0-2	
3-4	
5-6	
7-8	
9	
10	
11-12	
13-14	
15-16	
17-18	
19-20	
21-22	
23-25	
Over 25	

Physical and functional condition may contribute to an acceleration of the pool's age.